

**หลักสูตรวิศวกรรมศาสตรบัณฑิต สาขาวิศวกรรมเครื่องกล**  
**หลักสูตรฉบับปรับปรุง พ.ศ. ๒๕๕๐**  
**จำนวน ๑๔๗ หน่วยกิต**

**หมวดวิชาศึกษาทั่วไป**  
จำนวน ๑๐ หน่วยกิต

**หมวดวิชาเฉพาะ จำนวน ๑๑๑ หน่วยกิต**

**การฝึกงาน**  
๑ หน่วยกิต (๕ สัปดาห์ หรือ ๒๖๖ ชั่วโมง)  
EGME 303 Mechanical Engineering  
Training (01-35)

**หมวดวิชาเลือกเสรี**  
จำนวน ๖ หน่วยกิต

**I Humanities and Social Science 12 Credit**

MUGE 101	General Education for Human Development	2(1-2-3)
MUGE 102	Social Studies for Human Development	3(2-2-5)
MUGE 103	Arts and Science for Human Development	2(1-2-3)
EGID 300	Philosophy, Ethics and Laws for Engineers	1(1-0-2)
Select 4 Credit from :		
SHSS 130	Principles of Economics	2(2-0-4)
SHSS 140	General Psychology	2(2-0-4)
SHSS 142	Social Psychology	2(2-0-4)
SHSS 144	Principles of Communication	2(2-0-4)
SHSS 160	Principles of Administration	2(2-0-4)
SHSS 161	Policy and Planning	2(2-0-4)
SHHU 103	Art Appreciation	2(2-0-4)
SHHU 105	Social Philosophy	2(2-0-4)
SHHU 108	Human Relation and Self-Development	2(2-0-4)
SHHU 110	Human and Culture	2(2-0-4)
SHHU 112	Group Dynamics and Teamwork	2(2-0-4)
SHHU 133	Rhetoric for Leadership	2(2-0-4)
SHED 101	Physical Education Activity-Swimming	1(0-2-1)
SHED 114	Physical Education Activity-Social Dance	1(0-2-1)
SHED 117	Physical Education Activity-Badminton	1(0-2-1)
SHED 118	Physical Education Activity-Tennis	1(0-2-1)
SHED 125	Physical Education Activity-Volleyball	1(0-2-1)
SHED 126	Physical Education Activity-Petaungue	1(0-2-1)
MGID 101	Administration and General Management	3(3-0-6)
MSID 102	Chorus	1(0-2-1)
EGID 300	Philosophy, Ethics and Laws for Engineers	1(1-0-2)
EGIE 430	Industrial Management for Engineers	3(3-0-6)
EGIE 436	Industrial and Commercial Laws	3(3-0-6)

**II Languages 12 Credit**

ARTH 100	Art of Using Thai Language in Communication	3(2-2-5)
Require 6 Credits from :		
AREN 103	English Level 1	3(2-2-5)
AREN 104	English Level 2	3(2-2-5)
AREN 105	English Level 3	3(2-2-5)
AREN 106	English Level 4	3(2-2-5)
AREN 107	English Level 5	3(2-2-5)
AREN 108	English Level 6	3(2-2-5)
Select 3 Credit from :		
AREN 207	Principle of Translation	3(3-0-6)
AREN 304	Analytical Reading	3(2-2-5)
AREN 306	Advanced Level Conversation I	3(2-2-5)
AREN 350	Business Writing	3(3-0-6)
AREN 351	Summary Writing and Note-Taking	3(3-0-6)
AREN 401	Advanced Level Conversation II	3(2-2-5)
AREN 402	Public Speaking	3(2-2-5)
AREN 403	Academic Reading	3(2-2-5)
AREN 404	Academic Writing	3(2-2-5)
EGID 290	English for Engineers	3(3-0-6)
EGID 490	English Communication for Engineers	3(3-0-6)

**III Science and Mathematics 6 Credit**

EGCO 111	Computer Programming	3(2-3-5)
EGIE 335	Cost Analysis and Budgeting	3(3-0-6)

**กลุ่มวิชาแกน**  
จำนวน ๒๕ หน่วยกิต

EGME 102	Engineering Drawing	3(2-3-5)
EGID 200	Engineering Mathematics	3(3-0-6)
EGIE 101	Basic Engineering Practice	2(1-3-3)
SCCH 113	General Chemistry	3(3-0-6)
SCCH 118	Chemistry Laboratory	1(0-3-1)
SCPY 110	Physics Laboratory I	1(0-3-1)
SCPY 151	General Physics I	3(3-0-6)
SCPY 152	General Physics II	3(3-0-6)
SCMA 115	Calculus	3(3-0-6)
SCMA 165	Ordinary Differential Equations	3(3-0-6)

**กลุ่มวิชาเฉพาะบังคับ**  
จำนวน ๘๑ หน่วยกิต

EGME 121	Engineering Mechanics I	3(3-0-6)
EGME 202	Computer Aided Design and Engineering	2(1-3-3)
EGME 204	Mathematics for Mechanical Engineers	3(3-0-6)
EGME 206	Numerical Method for Engineers	3(3-0-6)
EGME 213	Mechanics of Materials I	3(3-0-6)
EGME 221	Engineering Mechanics II	3(3-0-6)
EGME 231	Thermodynamics I	3(3-0-6)
EGME 234	Fluid Mechanics I	3(3-0-6)
EGME 252	Automotive Engineering I	3(2-3-5)
EGME 321	Mechanical Vibration	3(3-0-6)
EGME 323	Mechanical Design I	3(3-0-6)
EGME 324	Mechanics of Machinery	3(3-0-6)
EGME 325	Automatic Control	3(3-0-6)
EGME 332	Thermodynamics II	3(3-0-6)
EGME 334	Heat Transfer	3(3-0-6)
EGME 352	Internal Combustion Engines	3(3-0-6)
EGME 371	Mechanical Engineering Lab. I	1(0-3-1)
EGME 372	Mechanical Engineering Lab. II	1(0-3-1)
EGME 421	Mechanical Design II	3(3-0-1)
EGME 442	Air Conditioning	3(3-0-6)
EGME 495	Project Seminar	1(0-3-1)
EGME 499	Mechanical Engineering Project	2(0-6-2)
EGEE 217	Fundamental of Electrical Engineering	3(3-0-6)
EGEE 218	Fundamental of Electrical Engineering Laboratory	1(0-3-1)
EGIE 103	Engineering Materials	3(3-0-6)
EGIE 204	Manufacturing Processes	3(3-0-6)
EGIE 261	Probability and Statistics	3(3-0-6)

**กลุ่มวิชาเฉพาะเลือก**  
เลือกจำนวน ๑๕ หน่วยกิต จากรายชื่อวิชาที่สนใจ ดังต่อไปนี้

EGEE 243	Analog and Digital Electronics	3(3-0-6)
EGEE 351	Electrical Machines	3(3-0-6)
EGEE 360	Signals and Systems	3(3-0-6)
EGEE 460	Discrete-Time Signal Processing	3(3-0-6)
EGIE 206	Production Engineering	3(3-0-6)
EGIE 333	Engineering Economy	3(3-0-6)
EGIE 363	Quality Control	3(3-0-6)
EGIE 379	Safety Engineering	3(3-0-6)
EGME 312	Mechanics of Material II	3(3-0-6)
EGME 333	Fluid Mechanics II	3(3-0-6)
EGME 335	Basic Aerodynamics	3(3-0-6)
EGME 342	Refrigeration	3(3-0-6)
EGME 353	Mechanics of Vehicles	3(3-0-6)
EGME 354	Fundamental of Powertrain Control	3(3-0-6)
EGME 355	High Performance Powertrain System	3(2-3-5)
EGME 361	Robot Actuator and Sensors	3(2-3-5)
EGME 362	Introduction to Mechatronics	3(2-3-5)
EGME 381	Fundamental of Energy Conversion	3(3-0-6)
EGME 390-399	Selected Topics in Mechanical Engineering	3(3-0-6) or 3(2-3-5)
EGME 402	Monitoring and Maintenance Engineering	3(3-0-6)
EGME 423	Applied Dynamics	3(3-0-6)
EGME 431	Fluid Machinery	3(3-0-6)
EGME 432	Plumbing System Design	3(3-0-6)
EGME 433	Heat Exchanger Design	3(3-0-6)
EGME 434	Combustion	3(3-0-6)
EGME 443	Refrigeration and Air Condition System Design	3(3-0-6)
EGME 444	Refrigeration and Air Condition Practice	3(2-3-5)
EGME 450	Computer Aided Powertrain Design	3(2-3-5)
EGME 451	Power Plant Engineering (*)	3(3-0-6)
EGME 453	Vehicle Propulsion and Maneuver Control	3(2-3-5)
EGME 454	Theory and Design of Vehicle Structure and Suspension	3(2-3-5)
EGME 455	On-Board Vehicle Electronics to Control Syster and Components	3(2-3-5)
EGME 456	Renewable Energy Resources	3(3-0-6)
EGME 459	Fundamental of Solar Energy	3(2-3-5)
EGME 461	Introduction to Robotics	3(3-0-6)
EGME 462	Applied Pneumatics and Hydraulics	3(2-3-5)
EGME 463	Mechanical Engineering Measurement	3(2-3-5)
EGME 483	Gas Turbines	3(3-0-6)
EGME 484	Thermal System Design	3(3-0-6)
EGME 485	Energy Management and Economics	3(3-0-6)
EGME 487	Energy Management in Buildings	3(2-3-5)
EGME 488	Energy Management in Industry	3(2-3-5)
EGME 490-494	Special Topics in Mechanical Engineering	3(3-0-6) or 3(2-3-5)